U

YAMAHA

# HTR-5630

*AV Receiver*

OWNER'S MANUAL

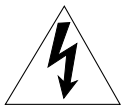
# IMPORTANT SAFETY INSTRUCTIONS

**CAUTION**

**RISK OF ELECTRIC SHOCK**
**DO NOT OPEN**

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

- Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**1** Read Instructions – All the safety and operating instructions should be read before the product is operated.

**2** Retain Instructions – The safety and operating instructions should be retained for future reference.

**3** Heed Warnings – All warnings on the product and in the operating instructions should be adhered to.

**4** Follow Instructions – All operating and use instructions should be followed.

**5** Cleaning – Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

**6** Attachments – Do not use attachments not recommended by the product manufacturer as they may cause hazards.

**7** Water and Moisture – Do not use this product near water – for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.

**8** Accessories – Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer’s instructions, and should use a mounting accessory recommended by the manufacturer.

**9** A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

**10** Ventilation – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer’s instructions have been adhered to.

**11** Power Sources – This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

**12** Grounding or Polarization – This product may be equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

**13** Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

**14** Lightning – For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

**15** Power Lines – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

**16** Overloading – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

**17** Object and Liquid Entry – Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

**18** Servicing – Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

**19** Damage Requiring Service – Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- **a)** When the power-supply cord or plug is damaged,
- **b)** If liquid has been spilled, or objects have fallen into the product,
- **c)** If the product has been exposed to rain or water,

**d)** If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation,

**e)** If the product has been dropped or damaged in any way, and

**f)** When the product exhibits a distinct change in performance - this indicates a need for service.

**20** Replacement Parts – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

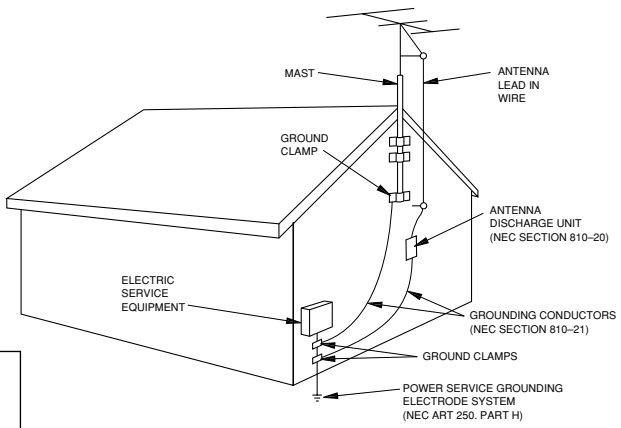
**21** Safety Check – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

**22** Wall or Ceiling Mounting – The unit should be mounted to a wall or ceiling only as recommended by the manufacturer.

**23** Heat – The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

**24** Outdoor Antenna Grounding – If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING


MAST
ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810–20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810–21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250. PART H)

NEC – NATIONAL ELECTRICAL CODE

**Note to CATV system installer:**

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

## FCC INFORMATION (for US customers)

**1. IMPORTANT NOTICE : DO NOT MODIFY THIS UNIT!**

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

**2. IMPORTANT :** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

**3. NOTE :** This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices.

This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices.

Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Electronics Corp., U.S.A. 6660 Orangethorpe Ave, Buena Park, CA 90620.

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

# CAUTION: READ THIS BEFORE OPERATING YOUR UNIT.

1 **To assure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.**

2 **Install this sound system in a well ventilated, cool, dry, clean place — away from direct sunlight, heat sources, vibration, dust, moisture, and/or cold. Allow ventilation space of at least 30 cm on the top, 20 cm on the left and right, and 20 cm on the back of this unit.**

3 **Locate this unit away from other electrical appliances, motors, or transformers to avoid humming sounds.**

4 **Do not expose this unit to sudden temperature changes from cold to hot, and do not locate this unit in a environment with high humidity (i.e. a room with a humidifier) to prevent condensation inside this unit, which may cause an electrical shock, fire, damage to this unit, and/or personal injury.**

5 **Avoid installing this unit where foreign object may fall onto this unit and/or this unit may be exposed to liquid dripping or splashing. On the top of this unit, do not place:**
   - **– Other components, as they may cause damage and/or discoloration on the surface of this unit.**
   - **– Burning objects (i.e. candles), as they may cause fire, damage to this unit, and/or personal injury.**
   - **– Containers with liquid in them, as they may fall and liquid may cause electrical shock to the user and/or damage to this unit.**

6 **Do not cover this unit with a newspaper, tablecloth, curtain, etc. in order not to obstruct heat radiation. If the temperature inside this unit rises, it may cause fire, damage to this unit, and/or personal injury.**

7 **Do not plug in this unit to a wall outlet until all connections are complete.**

8 **Do not operate this unit upside-down. It may overheat, possibly causing damage.**

9 **Do not use force on switches, knobs and/or cords.**

10 **When disconnecting the power cord from the wall outlet, grasp the plug; do not pull the cord.**

11 **Do not clean this unit with chemical solvents; this might damage the finish. Use a clean, dry cloth.**

12 **Only voltage specified on this unit must be used. Using this unit with a higher voltage than specified is dangerous and may cause fire, damage to this unit, and/or personal injury. YAMAHA will not be held responsible for any damage resulting from use of this unit with a voltage other than specified.**

13 **To prevent damage by lightning, disconnect the power cord from the wall outlet during an electrical storm.**

14 **Do not attempt to modify or fix this unit. Contact qualified YAMAHA service personnel when any service is needed. The cabinet should never be opened for any reasons.**

15 **When not planning to use this unit for long periods of time (i.e. vacation), disconnect the AC power plug from the wall outlet.**

16 **Be sure to read the "TROUBLESHOOTING" section on common operating errors before concluding that this unit is faulty.**

17 **Before moving this unit, press STANDBY/ON to set this unit in standby mode, and disconnect the AC power plug from the wall outlet.**

18 **VOLTAGE SELECTOR (General model only)**
**The VOLTAGE SELECTOR on the rear panel of this unit must be set for your local main voltage BEFORE plugging into the AC main supply. Voltages are 110V-120V, 220V-240V AC, 50/60 Hz.**

This unit is not disconnected from the AC power source as long as it is connected to the wall outlet, even if this unit itself is turned off. This state is called standby mode. In this state, this unit is designed to consume a very small quantity of power.

**WARNING**
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

**IMPORTANT**
Please record the serial number of this unit in the space below.
MODEL:
Serial No.:
The serial number is located on the rear of the unit. Retain this Owner's Manual in a safe place for future reference.

**FOR CANADIAN CUSTOMERS**
To prevent electric shock, match wide blade of plug to wide slot and fully insert.
This Class B digital apparatus complies with Canadian ICES-003.

## We Want You Listening For A Lifetime

YAMAHA and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion – and, most importantly, without affecting your sensitive hearing.

Since hearing damage from loud sounds is often undetectable until it is too late, YAMAHA and the Electronic Industries Association's Consumer Electronics Group recommend you to avoid prolonged exposure from excessive volume levels.

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# FEATURES

### Built-in 5-channel power amplifier

- Minimum RMS output power
  (0.1% THD, 1 kHz, 6Ω)
  [U.S.A. and Canada models]
  Main: 70 W + 70 W
  Center: 70 W
  Rear: 70 W + 70 W
  [Other models]
  Main: 60 W + 60 W
  Center: 60 W
  Rear: 60 W + 60 W

### Multi-mode digital sound field processing

- Dolby Pro Logic/Dolby Pro Logic II decoder
- Dolby Digital/Dolby Digital + Matrix 6.1 Decoder
- DTS/DTS + Matrix 6.1 Decoder
- CINEMA DSP: Combination of YAMAHA DSP technology and Dolby Pro Logic, Dolby Digital or DTS
- Virtual CINEMA DSP
- SILENT CINEMA DSP

### Sophisticated AM/FM Tuner

- 40-Station random access preset tuning
- Automatic preset tuning
- Preset station shifting capability (Preset editing)

### Other features

- 96 kHz/24-bit D/A converter
- Set menu for optimizing this unit for your Audio/Video system
- Test tone generator for easier speaker balance adjustment
- 6-channel external decoder input
- Optical and coaxial digital audio signal jacks
- Sleep timer
- Remote control with preset manufacturer codes

## ■ About this manual

- : indicates a tip for your operation.
- Some operations can be performed by using either the buttons on the main unit or on the remote control. In cases when the button names differ between the main unit and the remote control, the button name on the remote control is given in parentheses.
- This manual is printed prior to production. Design and specifications are subject to change in part for the reason of the improvement in operativity ability, and others. In this case, the product has priority.

Manufactured under license from Dolby Laboratories.

"Dolby", "Pro Logic", and the double-D symbol are trademarks of Dolby Laboratories.

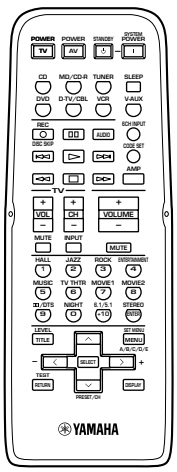
"DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

# GETTING STARTED

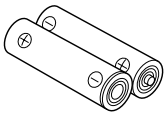
## Supplied accessories

After unpacking, check that the following parts are contained.

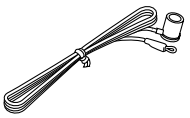
**Remote control**




**Batteries (2)**
**(AA, R06, UM-3)**

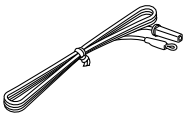


**Indoor FM antenna**
**(U.S.A., Canada, China, Korea and General models)**



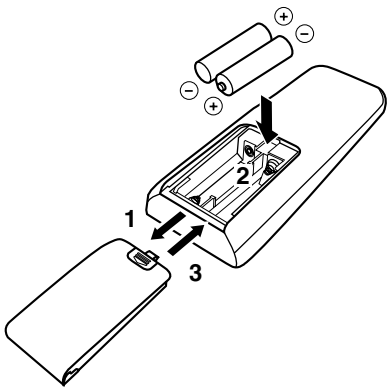
**AM loop antenna**

**(Europe, U.K., Australia and Singapore models)**



## Installing batteries in the remote control

Insert the batteries in the correct direction by aligning the + and – marks on the batteries with the polarity markings (+ and –) inside the battery compartment.




**1 Press the part marked with a ≡ and slide off the battery compartment cover.**

**2 Insert the two batteries supplied (AA, R06, UM-3) according to the polarity markings on the inside of the battery compartment.**

**3 Slide the cover back on so that it snaps into place.**

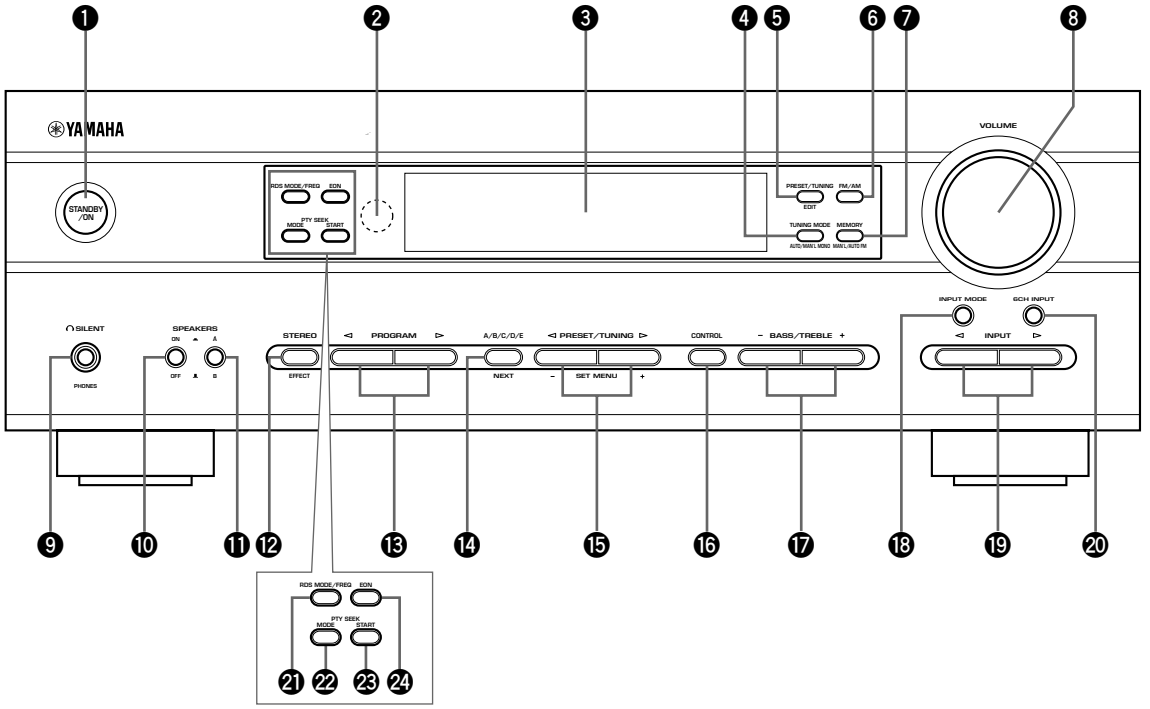
### ■ Notes on batteries

- Change all of the batteries if you notice a decrease in the operating range of the remote control.
- Do not use old batteries together with new ones.
- Do not use different types of batteries (such as alkaline and manganese batteries) together. Read the packaging carefully as these different types of batteries may have the same shape and color.
- If the batteries have leaked, dispose of them immediately. Avoid touching the leaked material or letting it come into contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.

If the remote control is without batteries for more than 2 minutes, or if exhausted batteries remain in the remote control, the contents of the memory may be cleared. When the memory is cleared, insert new batteries, set up the manufacturer code and program any acquired functions that may have been cleared.

# CONTROLS AND FUNCTIONS

## Front panel




**(U.K. and Europe models only)**

### ❶ STANDBY/ON

Turns the unit on, or sets it in standby mode. When you turn the unit on, you will hear a click and there will be a 4 to 5-second delay before it can reproduce sound.

> **Standby mode**
> In this mode, the unit uses a small amount of power in order to receive infrared-signals from the remote control.

### ❷ Remote control sensor

Receives signals from the remote control.

### ❸ Front panel display

Shows information about the operational status of the unit.

### ❹ TUNING MODE (AUTO/MAN'L MONO)

Switches the tuning mode between automatic and manual.

### ❺ PRESET/TUNING (EDIT)

Switches the function of PRESET/TUNING ⊲ / ⊳ between selecting a preset station number and tuning (the colon (:) turns on or off).
This button is also used to exchange the assignment of two preset stations with each other.

### ❻ FM/AM

Switches the reception band between FM and AM.

### ❼ MEMORY (MAN'L/AUTO FM)

Stores the current station in memory.

### ❽ VOLUME

Controls the output level of all audio channels.
This does not affect the OUT (REC) level.

### ❾ SILENT (PHONES jack)

Allows you to enjoy DSP effects when listening with headphones.
Inserting the plug from your headphones into the PHONES jack does not affect the sound output from the speakers. If you wish to stop the signal output to the speakers, press SPEAKERS ON/OFF so that it is in the OFF position.

### ❿ SPEAKERS ON/OFF

Turns on or off the speakers that you selected by SPEAKERS A/B.

### ⓫ SPEAKERS A/B

Selects the set of main speakers connected to the A or B terminals.

### ⓬ STEREO (EFFECT)
Switches between normal stereo and DSP effect reproduction. When you select STEREO, the unit mixes down all Dolby Digital and DTS signals (except the LFE channel) as well as those 2-channel signals without effects, to the main left and right speakers.

### ⓭ PROGRAM ◁ / ▷
Select the DSP program.

### ⓮ A/B/C/D/E
Selects preset station groups A to E when the unit is in tuner mode.

### NEXT
Selects the set menu mode when the unit is not in tuner mode.

### ⓯ PRESET/TUNING ◁ / ▷
Select preset station numbers 1 to 8 when a colon (:) is displayed in the front panel display.
Select the tuning frequency when a colon (:) is not displayed when the unit is in tuner mode.

### SET MENU –/+
Adjust settings on the set menu when the unit is not in tuner mode.

### ⓰ CONTROL
Switches between Bass (low-frequency response) control mode and Treble (high-frequency response) control mode.

### ⓱ BASS/TREBLE –/+
Increase or decrease low/high-frequency response when the unit is in Bass/Treble control mode. The sound changes 2dB each time you press one of these buttons. Control range: –10 to +10dB.

### ⓲ INPUT MODE
Sets the priority for the types of input signals (AUTO, DTS, ANALOG) received when one component is connected to two types of input jacks. You cannot set priority for an audio sources if you have selected 6CH INPUT as the input source.

### ⓳ INPUT ◁ / ▷
Selects the input source you want to listen to or watch.

### ⓴ 6CH INPUT
Selects the audio source connected to the 6CH INPUT jacks. This selection takes priority over sources selected with INPUT (or the input selector buttons on the remote control).

**(U.K. and Europe models only)**

### ㉑ RDS MODE/FREQ
Press this button when the unit is receiving an RDS station, to cycle the display mode among PS mode, PTY mode, RT mode, CT mode (if the station offers those RDS data service) and/or frequency display mode in turn.

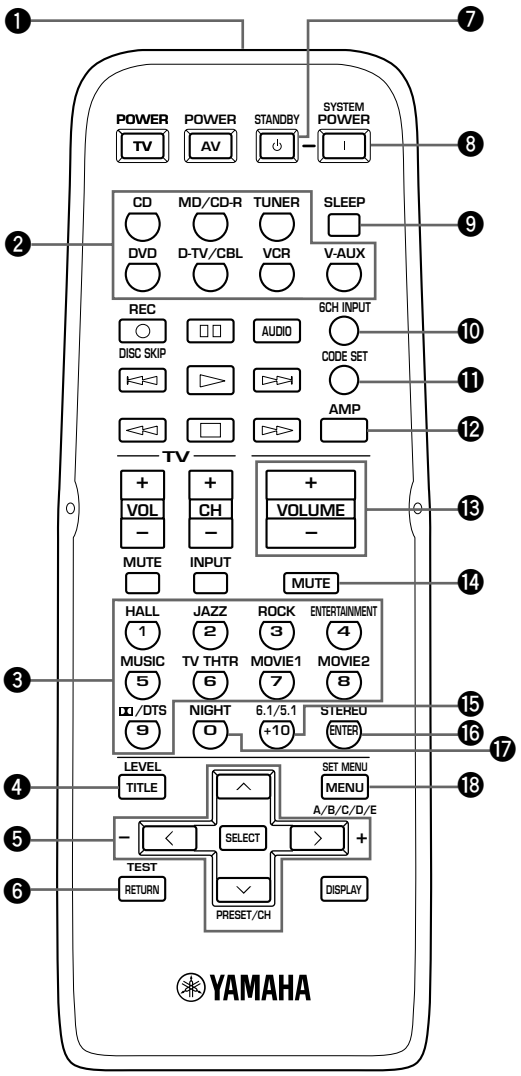
### ㉒ PTY SEEK MODE
Press this button to set the unit in the PTY SEEK mode.

### ㉓ PTY SEEK START
Press this button to begin searching for a station after the desired program type has been selected in the PTY SEEK mode.

### ㉔ EON
Press this button to select a radio program type (NEWS, INFO, AFFAIRS, SPORT) to tune in automatically.

# Remote control

This section describes the controls and functions of the remote control when it is set in AMP mode. Please make sure to select AMP mode before beginning operation.




### ❶ Infrared emitter
Outputs infrared control signals. Aim this emitter at the component you want to operate.

### ❷ Input selector buttons
Select the input source and set the remote control to operate the selected source component.

### ❸ DSP program
Select DSP programs when the remote control is in AMP mode. Press one of these buttons repeatedly to select a DSP program within a program group.

### ❹ LEVEL
Selects the effect speaker channel to adjust.

### ❺ Multi control section
Used to change and implement settings.

### ❻ TEST
Outputs a test tone for use when adjusting the speaker levels.

### ❼ STANDBY
Sets this unit in standby mode.

### ❽ SYSTEM POWER
Turns on the power of the unit.

### ❾ SLEEP
Sets the sleep timer.

### ❿ 6CH INPUT
Selects the audio source connected to the 6CH INPUT jacks.

### ⓫ CODE SET
Used to set up manufacturer codes (see page 44).

### ⓬ AMP
Switches control from a previously selected component by using the input selector buttons to this unit.

### ⓭ VOLUME +/–
Increases or decreases the volume level.

### ⓮ MUTE
Mutes the sound. Press again to restore the audio output to the previous volume level.

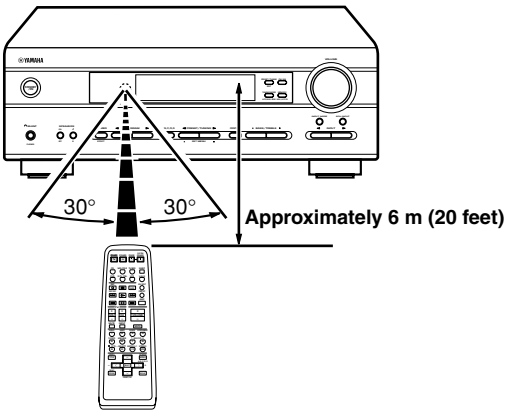
### ⓯ 6.1/5.1
Switches on or off the Dolby Digital + Matrix 6.1 or DTS + Matrix 6.1 decoder.

### ⓰ STEREO
Switches between normal stereo and DSP effect reproduction. When you select STEREO the unit mixes down all Dolby Digital and DTS signals (except the LFE channel) as well as those 2-channel signals without effect sounds, to the main left and right speakers.

### ⓱ NIGHT
Sets the unit in night listening mode.

### ⓲ SET MENU
Selects the set menu mode.

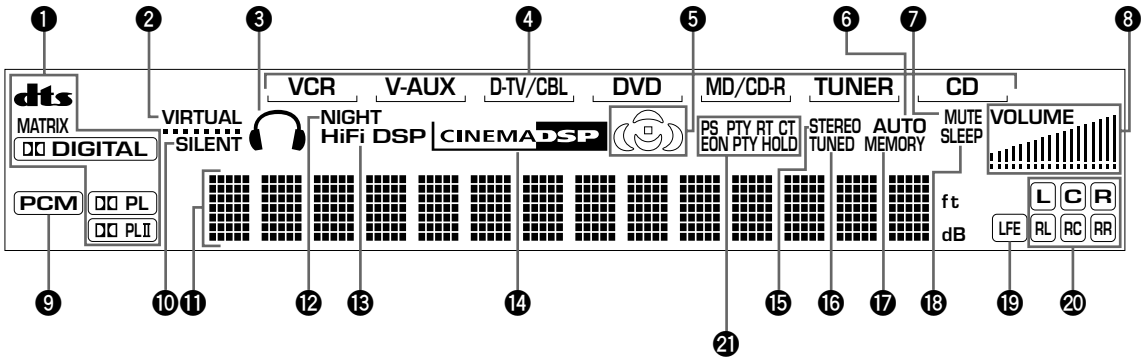
## ■ Using the remote control




The remote control transmits a directional infrared beam. Be sure to aim the remote control directly at the remote control sensor on the main unit during operation.

## ■ Handling the remote control
- Do not spill water or other liquids on the remote control.
- Do not drop the remote control.
- Do not leave or store the remote control in the following types of conditions:
  – high humidity or temperature such as near a heater, stove or bath;
  – dusty places; or
  – in places subject to extremely low temperatures.

## Front panel display




(U.K. and Europe models only)

**❶ Processor indicators**
The indicators for the various decoders light up when the decoders are in use.

**❷ VIRTUAL indicator**
Lights up when using Virtual CINEMA DSP.

**❸ Headphones indicator**
Lights up when headphones are connected to the headphone jack.

**❹ Input source indicator**
Highlights the current input source with a cursor.

**❺ Sound field indicator**
Displays the sound field management the unit is using when you listen to a DSP sound field program.

**❻ AUTO indicator**
Shows that this unit is in the automatic tuning mode.

**❼ MUTE indicator**
Flashes while the MUTE function is on.

**❽ VOLUME level indicator**
Indicates the volume level.

**❾ PCM indicator**
Lights up when this unit is reproducing PCM (pulse code modulation) digital audio signals.

**❿ SILENT indicator**
Lights up when headphones are connected and the digital sound field processor is on.

**⓫ Multi-information display**
Shows the current DSP program name and other information when you are adjusting or changing settings.

**⓬ NIGHT indicator**
Lights up when the unit is set to night listening mode.

**⓭ HiFi DSP indicator**
Lights up when you select a Hi-Fi DSP sound field program.

**⓮ CINEMA DSP indicator**
Lights up when you select a CINEMA DSP sound field program.

**⓯ STEREO indicator**
Lights up when the unit is receiving a strong signal from a FM stereo broadcast while the “AUTO” indicator is lit.

**⓰ TUNED indicator**
Lights up when this unit is tuned to a radio station.

**⓱ MEMORY indicator**
Flashes to show a station can be stored in memory.

**⓲ SLEEP indicator**
Lights up while the sleep timer is on.

**⓳ LFE indicator**
Lights up when the input signal contains an LFE signal.

**⓴ Input channel indicator**
The indicators for the appropriate sound channels light up when a digital signal from a source is played back.

**㉑ RDS indicator (U.K. and Europe models only)**
The name(s) of the RDS data offered by the currently received RDS station light(s) up.
EON indicator lights up when an RDS station that offers the EON data service is being received.
PTY HOLD indicator lights up while searching for stations in the PTY SEEK mode.

# CONNECTIONS

## *Before connecting components*

**CAUTION**

Do not connect this unit or other components to the mains power until all connections between the components have been completed.

- Be sure all connections are made correctly, that is to say L (left) to L, R (right) to R, "+" to "+" and "–" to "–". Some components require different connection methods and have different jack names. Refer to the operation instructions for each component you wish to connect to this unit.
- After you have completed all connections, check them again to make sure they are correct.
- The jack names correspond to the names on the input selector.

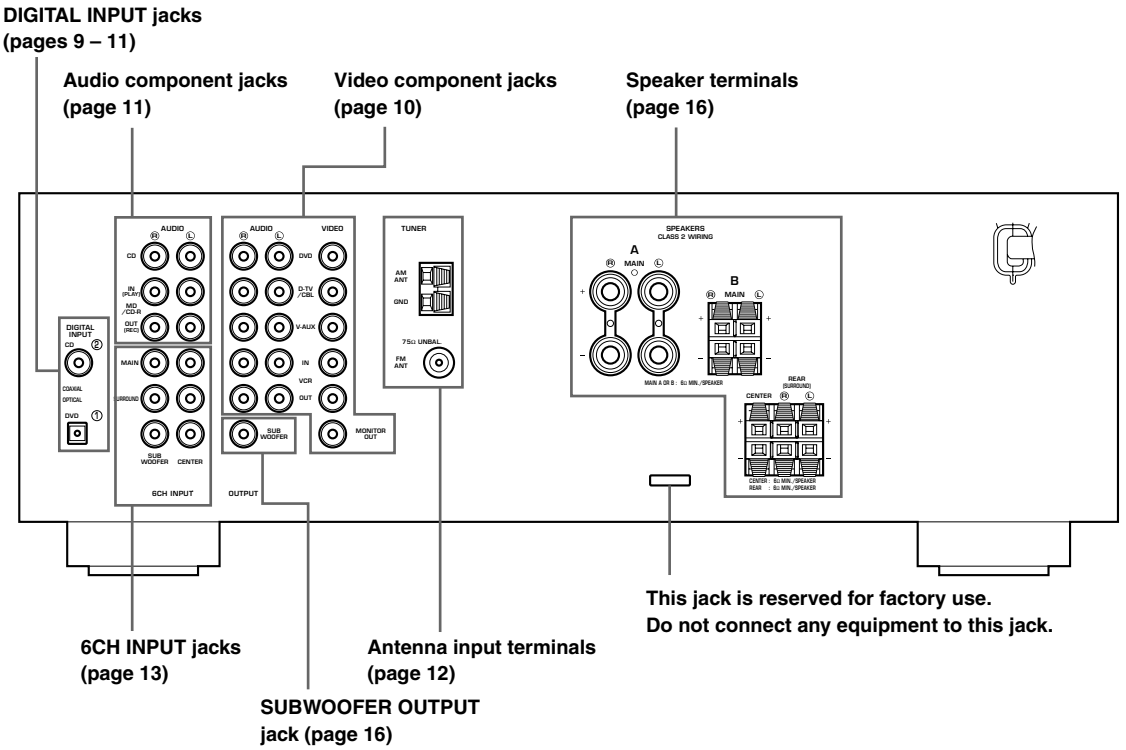
### ■ Connecting to digital jacks

This unit has digital jacks for direct transmission of digital signals through either a coaxial or fiber optic cable. You can use the digital jacks to input PCM, Dolby Digital and DTS bitstreams. Use digital connections if you wish to enjoy the multi-channel sound track of DVD material, etc. with DSP effects. Both digital input jacks are acceptable for 96 kHz sampling digital signals.

**Note**

- The OPTICAL jack on this unit conform to the EIA standard. If you use a fiber optic cable that does not conform to this standard this unit may not function properly.





# Connecting video components

## ■ Connecting a video monitor

Connect the video input jack on your video monitor to the MONITOR OUT VIDEO jack.

## ■ Connecting a DVD player

Connect the optical digital audio signal output jack on your component to the DIGITAL INPUT jack and connect the video signal output jack on the component to the VIDEO jack on this unit.

- Use the AUDIO jacks on this unit for a video component which does not have optical digital output jack. However, multi-channel reproduction cannot be obtained with audio signals input from the AUDIO jacks.

## ■ Connecting a digital TV/cable TV

Connect the video signal output jack on your component to the VIDEO jack on this unit.
Connect the audio signal output jacks on the component to the AUDIO jacks on this unit.

## ■ Connecting another video component

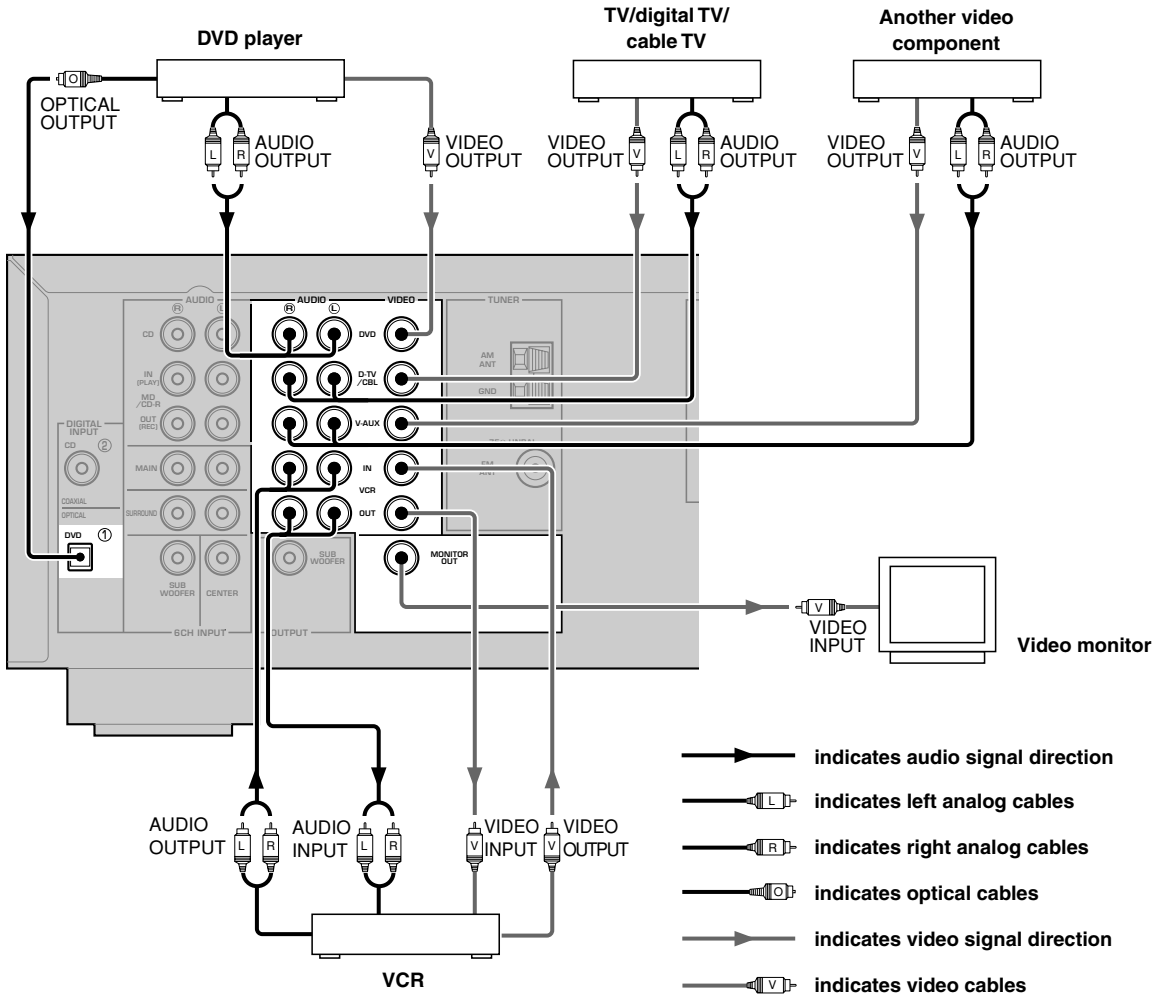
Connect the video signal output jack on your component to the VIDEO jack on this unit.
Connect the audio signal output jacks on the component to the AUDIO jacks on this unit.

## ■ Connecting a recording component

Connect the audio signal input jacks on your video component to the AUDIO OUT jacks on this unit. Then connect the video signal input jack on the video component to the VIDEO OUT jack on this unit for picture recording.
Connect the audio signal output jacks on your component to the AUDIO IN jacks on this unit. Then connect the video signal output jack on the component to the VIDEO IN jack on this unit to play a source from your recording component.

***Note***

- Once you have connected a recording component to this unit, keep its power turned on while using this unit. If the power is off, this unit may distort the sound from other components.



# Connecting audio components

## ■ Connecting a CD player

Connect the coaxial digital output jack on your CD player to the DIGITAL INPUT CD jack on this unit.

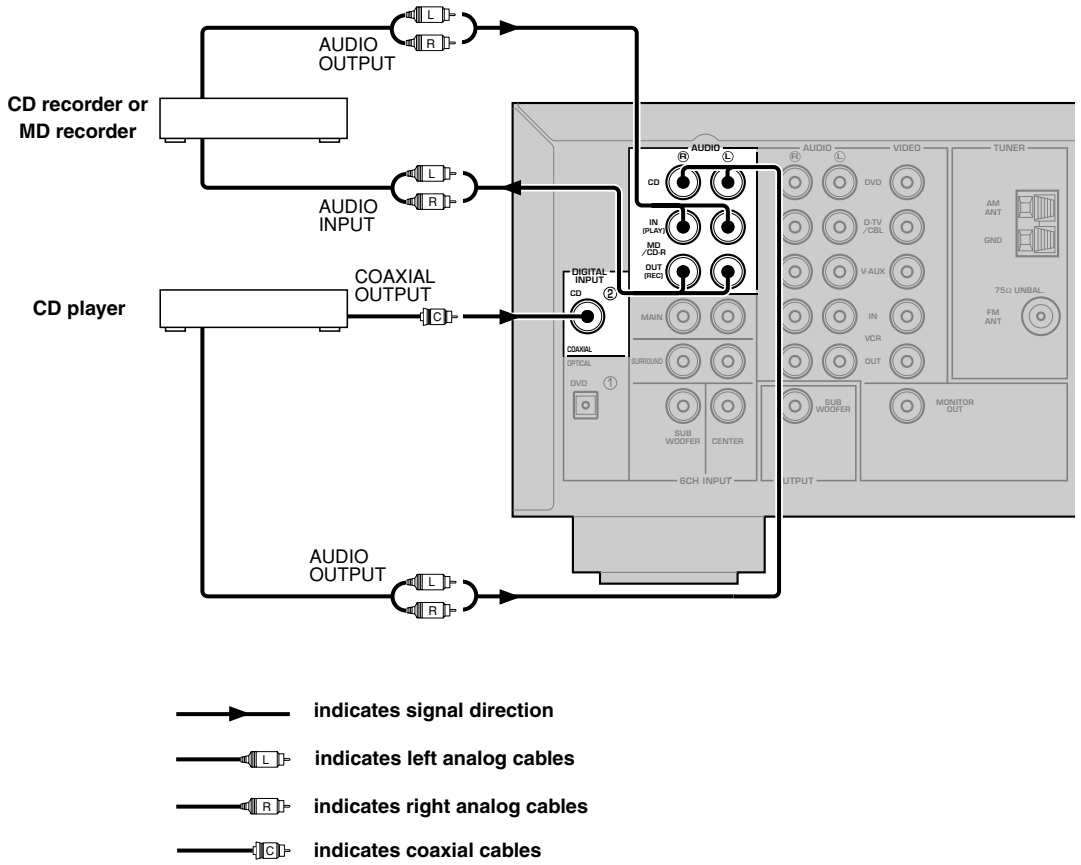
- Use the AUDIO jacks on this unit to connect to a CD player that does not have a COAXIAL DIGITAL OUTPUT jack, or to record from CD players.

## ■ Connecting a CD recorder or MD recorder

Connect the input jacks on your CD recorder or MD recorder to the MD/CD-R OUT (REC) jacks.
Connect the output jacks on your CD recorder or MD recorder to the MD/CD-R IN (PLAY) jacks to play a source from your recording component.

**Note**

- Once you have connected a recording component to this unit, keep its power turned on while using this unit. If the power is off, this unit may distort the sound from other components.




indicates signal direction

indicates left analog cables

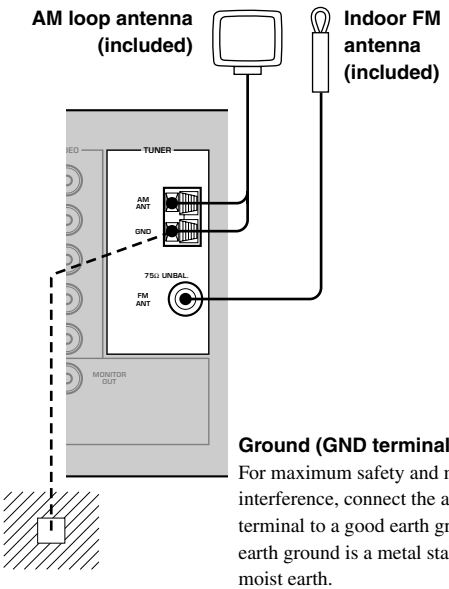
indicates right analog cables

indicates coaxial cables

# Connecting the antennas

Both AM and FM indoor antennas are included with this unit. In general, these antennas should provide sufficient signal strength.

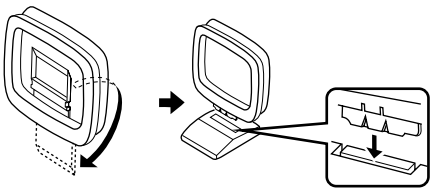
Connect each antenna correctly to the designated terminals.



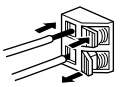

**Ground (GND terminal)**
For maximum safety and minimum interference, connect the antenna GND terminal to a good earth ground. A good earth ground is a metal stake driven into moist earth.

## ■ Connecting the AM loop antenna

**1 Set up the AM loop antenna, then connect it to the terminals on this unit.**



**2 Press and hold the tab to insert the AM loop antenna lead wires into the AM ANT and GND terminals.**



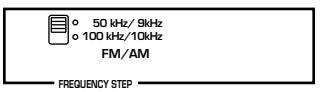
**3 Orient the AM loop antenna for the best reception.**

***Notes***

- The AM loop antenna should be placed away from this unit.
- The AM loop antenna should always be connected, even if an outdoor AM antenna is connected to this unit.

A properly installed outdoor antenna provides clearer reception than an indoor one. If you experience poor reception quality, an outdoor antenna may improve the quality. Consult the nearest authorized YAMAHA dealer or service center about the outdoor antennas.

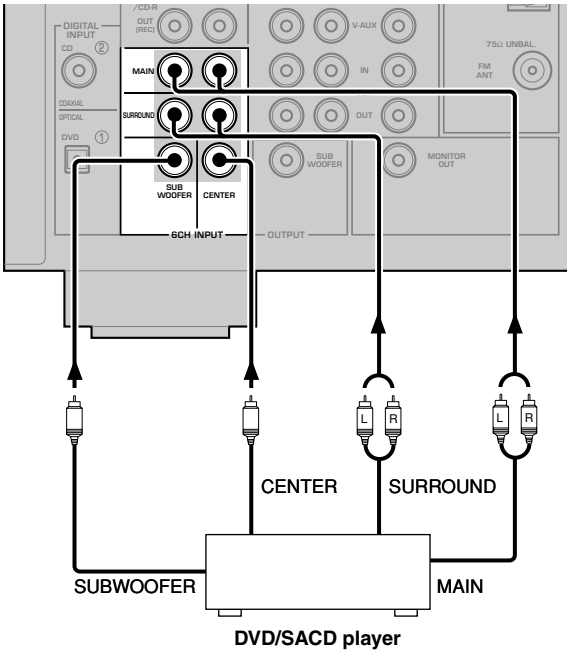
**FREQUENCY STEP switch (General model only)**




Because the inter-station frequency spacing differs in different areas, set the FREQUENCY STEP switch (located on the rear panel) according to the frequency spacing in your area.
North, Central and South America: 100 kHz/10 kHz
Other areas: 50 kHz/9 kHz
Before setting this switch, disconnect the AC power plug of this unit from the AC outlet.

# Connecting an external decoder

This unit is equipped with 6 additional input jacks (MAIN left and right, CENTER, SURROUND left and right and SUBWOOFER) for discrete multi-channel input from a component equipped with a multi-channel decoder and 6 channel output jacks such as a DVD/SACD player.




## Note

- When you select 6CH INPUT as the input source, the unit automatically turns off the digital sound field processor, and you cannot use DSP programs.

# Connecting the speakers

## ■ Speakers

This unit has been designed to provide the best sound-field quality with a 5-speaker system, using main left and right speakers, rear left and right speakers and a center speaker. If you use different brands of speakers (with different tonal qualities) in your system, the tone of a moving human voice and other types of sound may not shift smoothly. We recommend that you use speakers from the same manufacturer or speakers with the same tonal quality.

The main speakers are used for the main source sound plus effect sounds. They will probably be the speakers from your present stereo system. The rear speakers are used for effect and surround sounds. The center speaker is for the center sounds (dialog, vocals, etc.).

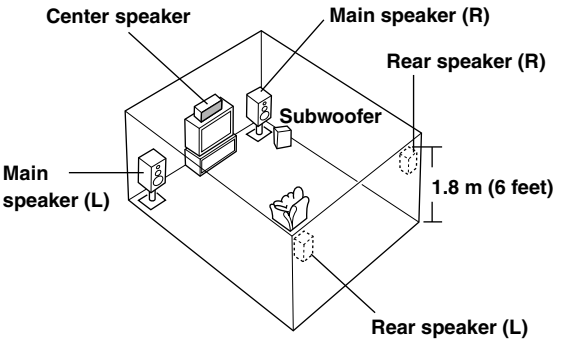
The main speakers should be high-performance models and have enough power-handling capacity to accept the maximum output of your audio system. The other speakers do not have to be equal to the main speakers. For precise sound localization, however, it is ideal to use the models of equivalent performance with the main speakers.

### Use of a subwoofer expands your sound field

It is also possible to further expand your system with the addition of a subwoofer. The use of a subwoofer is effective not only for reinforcing bass frequencies from any or all channels, but also for reproducing the LFE (low-frequency effect) channel with high fidelity when playing back Dolby Digital or DTS signals. The YAMAHA Active Servo Processing Subwoofer System is ideal for natural and lively bass reproduction.

## ■ Speaker placement

Refer to the following diagram when you place the speakers.




### Main speakers

Place the main left and right speakers an equal distance from the ideal listening position. The distance between each speaker and each side of the video monitor should also be the same.

### Center speaker

Align the front face of the center speaker with the front face of your video monitor. Place the speaker as close to the monitor as possible (such as directly over or under the monitor) and centrally between the main speakers.

### Rear speakers

Place these speakers behind your listening position, facing slightly inwards, about 1.8 m (6 feet) above the floor.

### Subwoofer

The position of the subwoofer is not so critical, because low bass sounds are not highly directional. However, it is better to place the subwoofer near the main speakers. Turn it slightly toward the center of the room to reduce wall reflections.

***Note***

- If you do not use any of effect speakers (rear and/or center), change the settings of "SOUND 1 SPEAKER SET" items at the set menu to direct signals to other terminals you have connected speakers to.

***CAUTION***

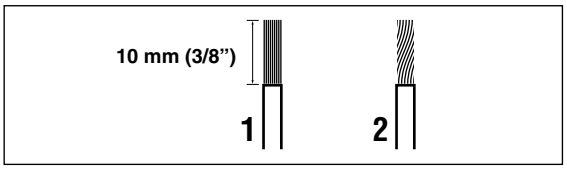
Use magnetically shielded speakers. If these speakers still create interference with the monitor, place the speakers away from the monitor.

## ■ Connections

Be sure to connect the left channel (L), right channel (R), "+" (red) and "–" (black) in accordance with the markers on this unit, the speakers, and the speaker cables. If the connections are faulty, no sound will be heard from the speakers, and if the polarity of the speaker connections is incorrect, the sound will be unnatural and lack bass.

**CAUTION**

- Use speakers with the specified impedance shown on the rear panel of this unit.
- Do not let the bare speaker wires touch each other or any metal part of this unit. This could damage this unit and/or the speakers.



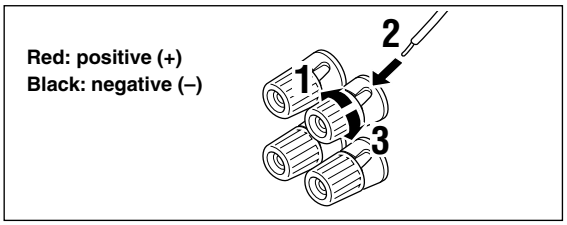

A speaker cord is actually a pair of insulated cables running side by side. One cable is colored or shaped differently, perhaps with a stripe, groove or ridge.

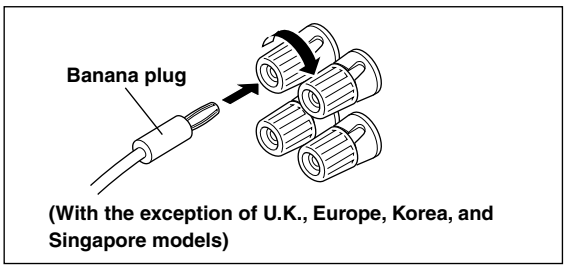
**1 Remove approximately 10 mm (3/8") of insulation from each of the speaker cables.**

**2 Twist the exposed wires of the cable together to prevent short circuits.**



### Connecting to the MAIN A SPEAKERS terminals




**1 Unscrew the knob.**

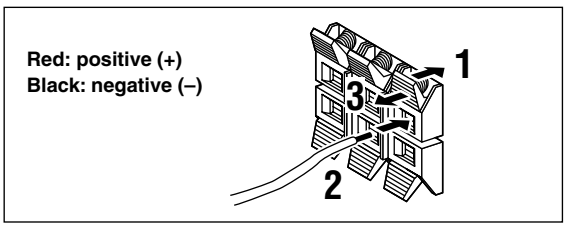
**2 Insert one bare wire into the hole in the side of each terminal.**

**3 Tighten the knob to secure the wire.**

(With the exception of U.K., Europe, Korea, and Singapore models)

- You can also use banana plug connectors. First, tighten the knob and then insert the banana plug connector into the end of the corresponding terminal.

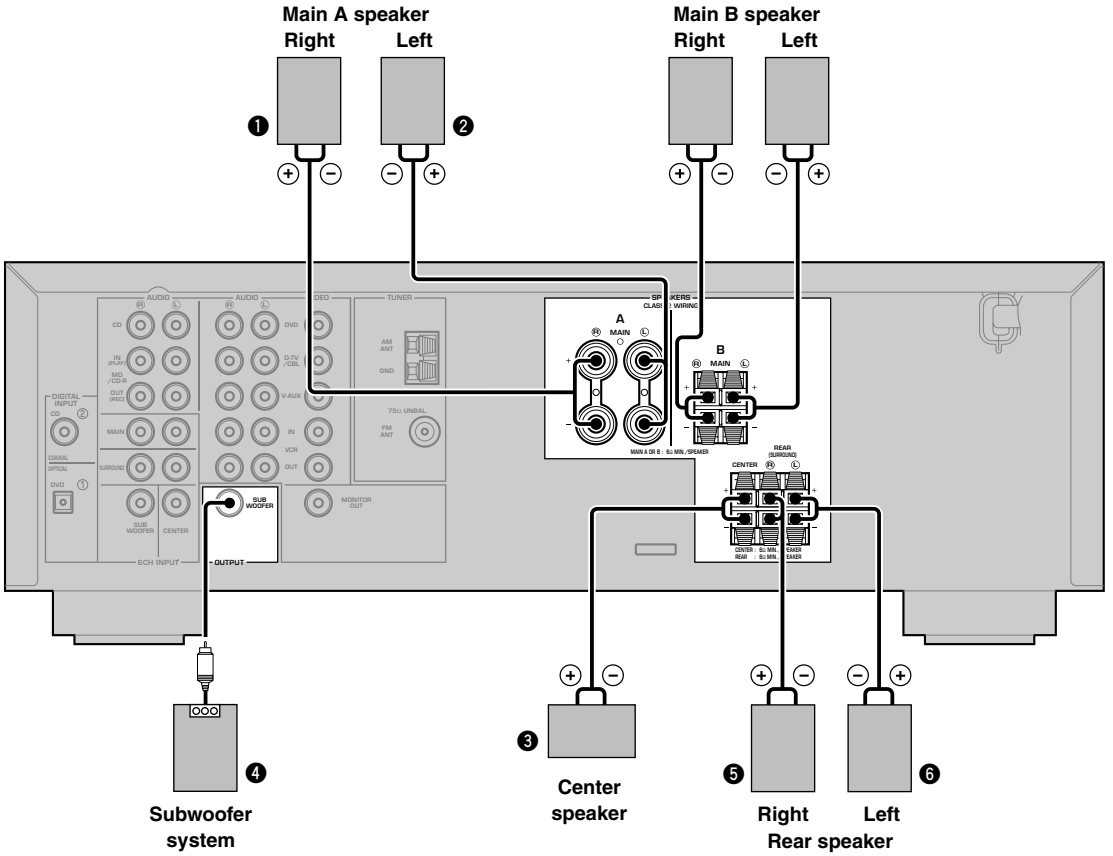
### Connecting to the MAIN B, CENTER and REAR SPEAKERS terminals




**1 Press and open the tab.**

**2 Insert one bare wire into the hole of each terminal.**

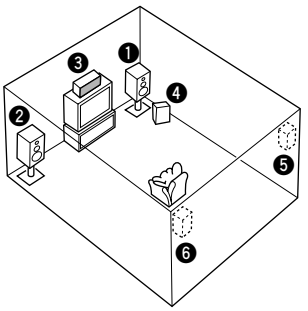
**3 Release the tab to secure the wire.**




### MAIN SPEAKERS terminals
You can connect up to two speaker systems to these terminals. When using only one speaker system, connect it to either of the MAIN A or the MAIN B terminals.

### REAR SPEAKERS terminals
A rear speaker system can be connected to these terminals.

### CENTER SPEAKER terminals
A center speaker can be connected to these terminals.



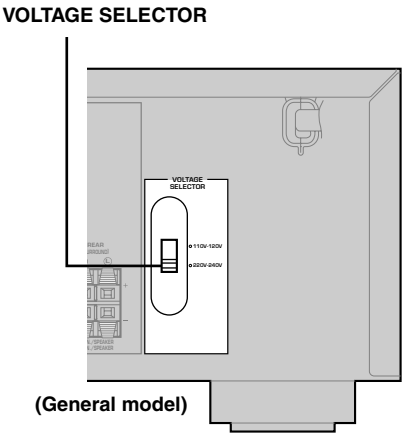
The diagram shows the speaker layout in the listening room.

### SUBWOOFER jack
When using a subwoofer with built-in amplifier, including the YAMAHA Active Servo Processing Subwoofer System, connect the input jack of the subwoofer system to this jack. This unit will direct low bass signals distributed from the main, center and/or rear channels to this jack in accordance with your SPEAKER SET selections. The LFE (low-frequency effect) signals generated when Dolby Digital or DTS is decoded are also directed to this jack in accordance with your SPEAKER SET selections.

***Notes***

- The cut-off frequency of the SUBWOOFER jack is 90 Hz.
- If you do not use a subwoofer, allocate the signals to the main left and right speakers by changing the setting of "SOUND 1 SPEAKER SET" item "1D BASS" on the set menu to MAIN.
- Use the control on the subwoofer to adjust its volume level. You can also adjust the volume level by using this unit's remote control (see "SETTING THE SPEAKER LEVELS" on page 46).

## Connecting the power supply cords




### ■ Connecting the AC power cord

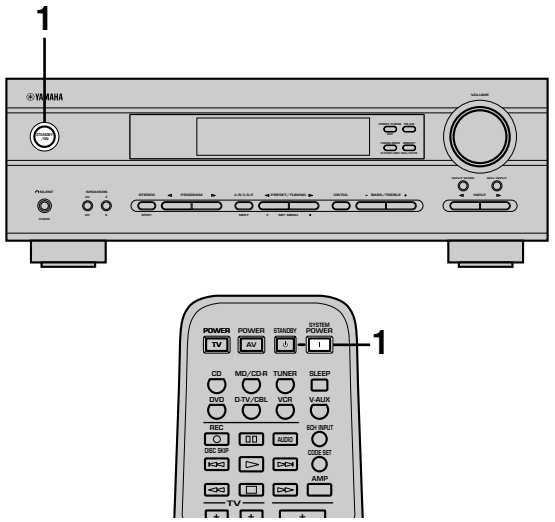
Plug in this unit to a wall outlet.

### ■ VOLTAGE SELECTOR (General model only)

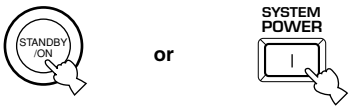
The VOLTAGE SELECTOR on the rear panel of this unit must be set for your local main voltage BEFORE plugging into the AC main supply. Voltages are 110V-120V/220V-240V AC, 50/60 Hz.

## Turning on the power

When all connections are complete, turn on the power of this unit.




**1 Press STANDBY/ON (SYSTEM POWER on the remote control) to turn on the power of this unit.**




**Front panel** **Remote control**

The level of the main volume, and then the current DSP program name appear on the front panel display.

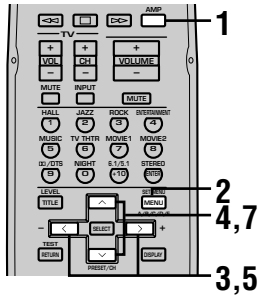
# BASIC SYSTEM SETTINGS

The “BASIC” menu allows you to set some of the basic “SOUND” menu parameters with a minimum of effort. If you wish to configure the unit more precisely to suit your listening environment, use the more detailed parameters from the “SOUND” menu instead of those under the “BASIC” menu (See page 38). Altering any parameters in the BASIC menu will reset all parameters in the “SOUND” menu.

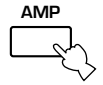
## *Using the basic menu*

Use the remote control to make adjustments.

- Press SPEAKERS A/B on the front panel to select the main speakers you want to use, and set SPEAKERS ON/OFF to the ON position.
- Make sure you disconnect headphones from this unit.



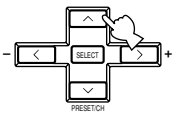

**1** **Press AMP.**




**2** **Press SET MENU.**

“BASIC MENU” appears on the front panel display, as shown here.

If the front panel display changes to show anything other than “BASIC MENU”, press ∧ until it displays “BASIC MENU”.




**3** **Press 〈 / 〉 to enter into the BASIC menu.**

The front panel display changes as shown here:

**4** **Press ∧ / ∨ to change the display to the setting you want to alter.**

**SETUP**

Changes the speaker and amplifier settings to suit the size of the room you are using. Refer to “Setting the unit to match your speaker system” on page 20 for more information.

**SP LEVEL**

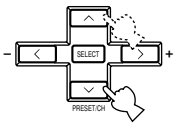
Adjusts the output levels of the speakers.
Refer to “Setting speaker output levels” on page 20 for more information.

**5** **Press 〈 / 〉 to enter the desired setting mode.**

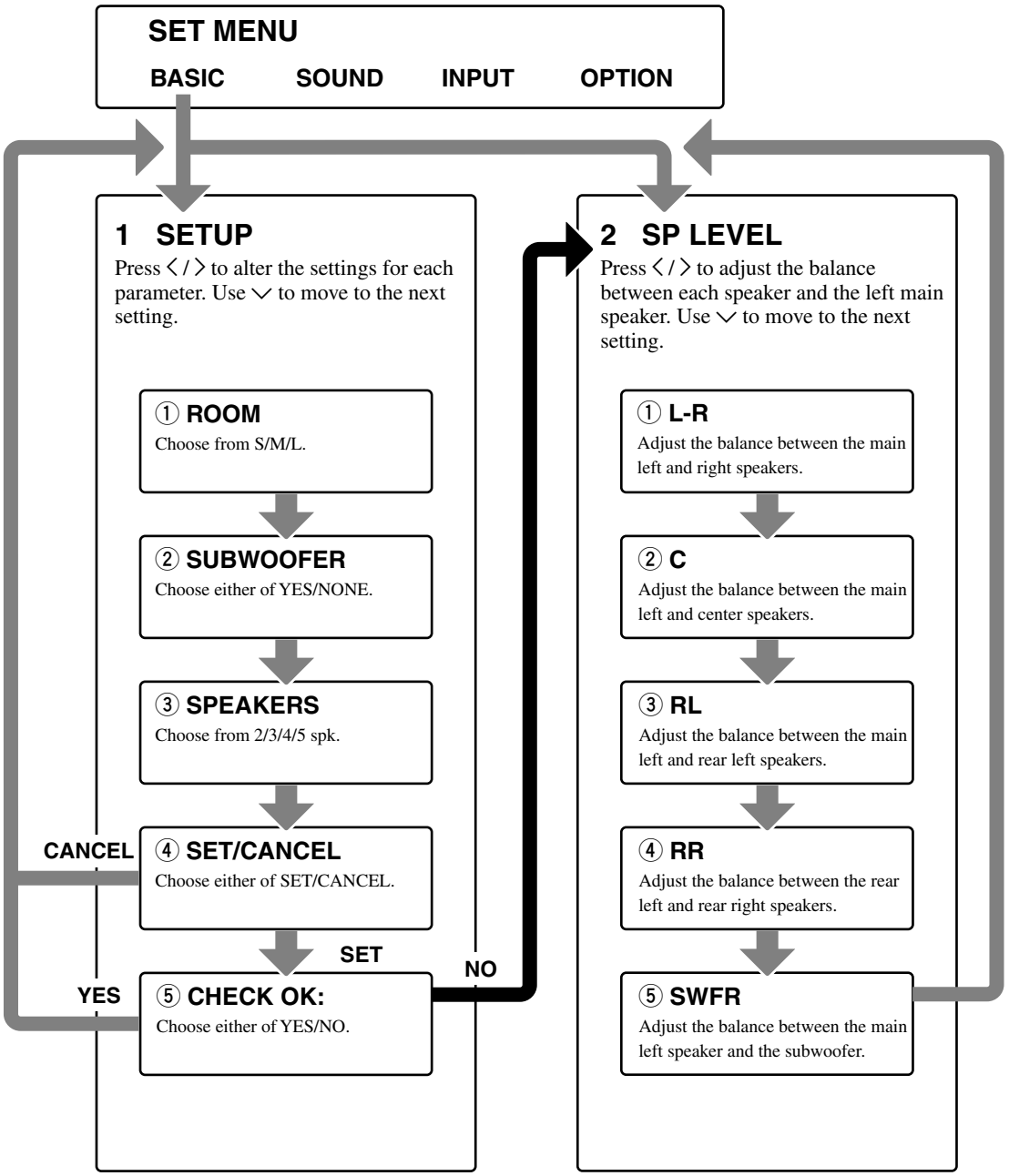
**6** **Change the unit settings to suit your listening environment. When you have finished, the unit will automatically return to the basic menu.**

**7** **Press ∧ / ∨ to exit from the set menu.**

The front panel display changes in the following order:




Exit
↑
BASIC
↓↑
SOUND
↓↑
INPUT
↓↑
OPTION
↓
Exit


SET MENU
BASIC
SOUND
INPUT
OPTION
1 SETUP
Press < / > to alter the settings for each parameter. Use ∨ to move to the next setting.
① ROOM
Choose from S/M/L.
② SUBWOOFER
Choose either of YES/NONE.
③ SPEAKERS
Choose from 2/3/4/5 spk.
④ SET/CANCEL
Choose either of SET/CANCEL.
CANCEL
SET
⑤ CHECK OK:
Choose either of YES/NO.
YES
NO
2 SP LEVEL
Press < / > to adjust the balance between each speaker and the left main speaker. Use ∨ to move to the next setting.
① L-R
Adjust the balance between the main left and right speakers.
② C
Adjust the balance between the main left and center speakers.
③ RL
Adjust the balance between the main left and rear left speakers.
④ RR
Adjust the balance between the rear left and rear right speakers.
⑤ SWFR
Adjust the balance between the main left speaker and the subwoofer.

- After altering the "1 SETUP" parameters, readjust the output levels of the speakers at "2 SP LEVEL".
- See pages 37 – 42 for a detailed explanation of the "SOUND", "INPUT" and "OPTION" menus.

## Setting the unit to match your speaker system

Follow the instructions below to set the amplifier output to match the size of your room and speakers. Press ∧ / ∨ to cycle through parameters 1 through 4, and < / > to alter the parameter setting.
Factory default settings are highlighted.

① **ROOM**
Settings: S, **M**, L
Select the size of the room you have installed your speakers in. Roughly speaking, the room sizes are defined as follows:

[U.S.A. and Canada models]
S: 16ft. x 3ft., 200sq.ft. (4.8 x 4m, 20m²)
M: 20ft. x 16ft., 300sq.ft. (6.3 x 5.0m, 30m²)
L: 26ft. x 19ft., 450sq.ft. (7.9 x 5.8m, 45m²)

[Other models]
S: 3.6m x 2.8m, 10m²
M: 4.8m x 4.0m, 20m²
L: 6.3m x 5.0m, 30m²

② **SUBWOOFER**
Settings: **YES**, NONE
Select YES if you have a subwoofer in your system, or NONE if you do not.

③ **SPEAKERS**
Settings: 2, 3, 4, **5** (spk)
Select the number of speakers you wish to use in your speaker configuration. This number does not include your subwoofer.

| Setting | Display | Speaker |
|---|---|---|
| 2spk | L R | Main L/Main R |
| 3spk | L C R | Main L/Center/Main R |
| 4spk | L R<br>RL RR | Main L/Main R/Rear L/ Rear R |
| 5spk | L C R<br>RL RR | Main L/Center/Main R/ Rear L/Rear R |

④ **SET or CANCEL**
Select SET to confirm the changes you made to the above three settings. The unit will output a test tone to the speakers (see ⑤). Alternatively, select CANCEL to exit this menu without altering any of the unit settings.

⑤ **Use the test tone to check the speaker levels.**
When you select SET in ④, the display changes to "CHECK: TestTone", and the unit outputs a test tone to each of the speakers in turn. When the test tone begins, the display changes to "CHECK OK?--YES".

If the volume of the test tone varies between speakers, press < / > to change the display to "NO". The unit will automatically enter the "2 SP LEVEL" mode.
If the test tone is output at the same volume from all of the speakers, select "CHECK OK: YES". Press ∨ to exit from the SETUP menu.

***Notes***

- The unit cycles the test tone around each of the speakers in turn twice.
- The indicator of the speaker currently outputting the test tone flashes on the front panel display.

## Setting speaker output levels (SP LEVEL)

Use this menu to compare and adjust the test tone output from each speaker to the output from the left main (or left rear) speaker so that the volume level for all speakers is identical. Press ∧ / ∨ to select a speaker, then adjust the balance using < / >.

***Note***

- The unit outputs the test tone from the selected speaker and the left main (or left rear) speaker in turn. The indicator of the speaker currently outputting the test tone flashes on the front panel display.

① **L-R**
Adjusts the balance between the main left and right speakers.

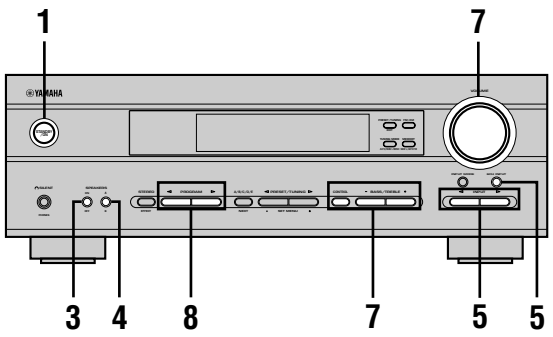
② **C**
Adjusts the balance between the main left and center speakers.

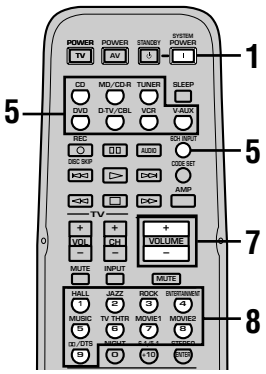
③ **RL**
Adjusts the balance between the main left and rear left speakers.

④ **RR**
Adjusts the balance between the rear left and rear right speakers.

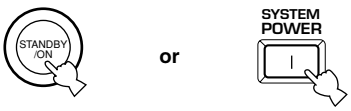
⑤ **SWFR**
Adjust the balance between the main left speaker and the subwoofer.

# PLAYBACK




**1** **Press STANDBY/ON (SYSTEM POWER on the remote control) to turn on the power.**

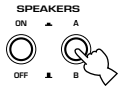



Front panel Remote control

**2** **Turn on the video monitor connected to this unit.**

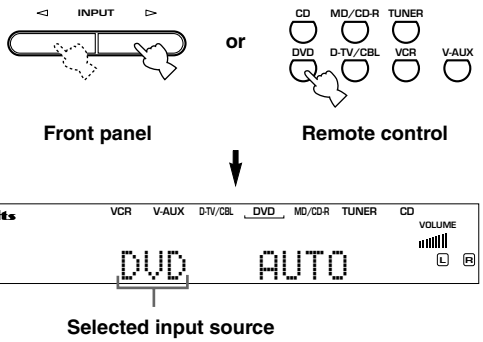
**3** **Press and set SPEAKERS ON/OFF inward (ON).**

**4** **Press and set SPEAKERS A/B inward (A) or outward (B) to select the main speakers you want to use.**




**5** **Press INPUT ◁ / ▷ repeatedly (one of the input selector buttons on the remote control) to select the input source.**

The selected input source name and input mode appear on the front panel display for a few seconds.



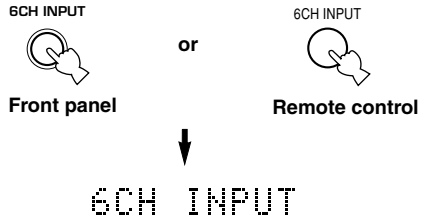

Front panel Remote control

Selected input source

### To select the audio source connected to the 6CH INPUT jacks

- Select the input to which the video source component is connected before selecting an audio source.

Press 6CH INPUT until "6CH INPUT" appears on the front panel display.



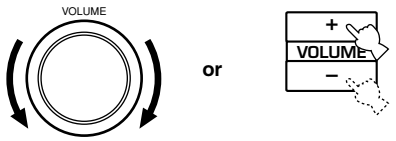

Front panel Remote control

***Note***

- If "6CH INPUT" is shown on the front panel display, no other source can be played. To select another input source, first press 6CH INPUT so that "6CH INPUT" disappears from the front panel display.

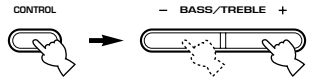
**6** **Start playback or select a broadcast station on the source component.**
Refer to the operation instructions for the component.

**7** **Adjust the volume to the desired level.**
The volume level is displayed digitally.
Example: –70 dB
Control range: VOLUME MUTE (minimum) to 0 dB (maximum)
The volume level indicator also shows the current volume level as a bar graph.




Front panel Remote control

If desired, use CONTROL and BASS/TREBLE –/+. These controls only effect the sound from the main speakers.

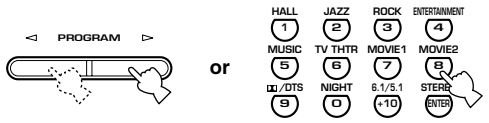



Front panel

***Notes***

- If you increase or decrease the high-frequency or the low-frequency sound to an extreme level, the tonal quality from the center and rear speakers may not match that of the main left and right speakers.
- If you have connected a recording component to the VCR OUT, or MD/CD-R OUT jacks, and you notice distortion or low volume during playback from other components, try turning the recording component on.

**8** **Select a DSP program if desired.**
Use PROGRAM ◁ / ▷ (DSP program buttons on the remote control) to select a DSP program. See pages 27 – 30 for details about DSP programs. When using the remote control, press AMP before selecting a DSP program.

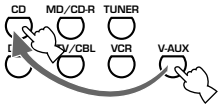



Front panel Remote control

## ■ BGV (background video) function

The BGV function allows you to view images from a video source together with sounds from an audio source. For example, you can enjoy listening to classical music while watching beautiful scenery from a video source on the video monitor.

Select a source from the video group, then select a source from the audio group using the input selector buttons on the remote control.




## ■ To mute the sound

**Press MUTE on the remote control.**
To resume audio output, press MUTE again.

- You can change the amount by which the unit reduces the volume in "OPTION 3 AUDIO MUTE" in the set menu.
- You can also cancel mute by pressing VOLUME +/–, etc.
- During muting, the MUTE indicator flashes on the front panel display.

## ■ Night listening mode

This mode reproduces dialogue clearly while reducing the volume of loud sound effects for easier listening at low volumes or at night.

**Press NIGHT on the remote control.**
Press NIGHT once more to return to normal reproduction.

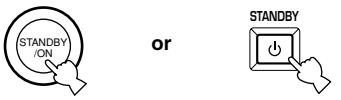
***Note***

- Setting the unit in standby mode cancels night listening mode.

- You can use night listening mode with any of the sound field programs.
- The NIGHT indicator on the front panel display lights when the unit is in night listening mode.
- Night listening mode may vary in effectiveness depending on the input source and surround sound settings you use.

## ■ When you have finished using this unit

**Press STANDBY/ON (STANDBY on the remote control) to set this unit in standby mode.**



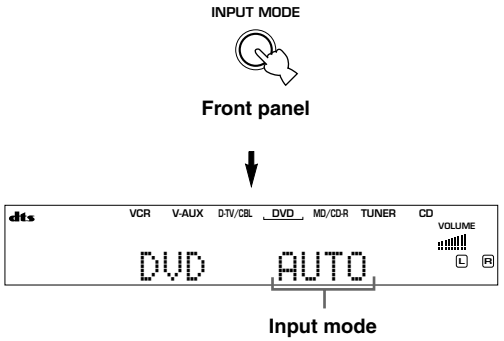

Front panel Remote control

# Input modes and indications

This unit is equipped with 2 types of input jacks for the CD and DVD sources only. You can select the type of input signals you wish to use.

Each time you turn on the unit power, the input mode is set to the "INPUT 2 INPUT MODE" setting defined in the set menu.

**Press INPUT MODE repeatedly until the desired input mode is shown on the front panel display.**




AUTO: In this mode, the input signal is selected automatically as follows:
1) Digital signal
2) Analog signal

DTS: In this mode, only digital input signals encoded with DTS are selected, even if the unit is receiving another signal simultaneously.

ANALOG: In this mode, only analog input signals are selected, even the unit is receiving digital signals at the same time.

### *Notes*

- When AUTO is selected, this unit automatically determines the type of signal. If it detects a Dolby Digital or DTS signal, the decoder automatically switches to the appropriate setting.
- When playing a disc encoded with Dolby Digital or DTS on some LD or DVD players, there is a delay in sound output for a moment when playback resumes after a search, because the unit must select the digital signal again.
- When playing a LD source that has not been digitally recorded, the unit may not output any sound for some LD players. In this case, set the input mode to ANALOG.

## ■ Notes on digital signals

The digital input jacks of this unit can handle 96 kHz sampling digital signals. Note the following when a digital signal with a sampling frequency greater than 48 kHz is input to this unit:

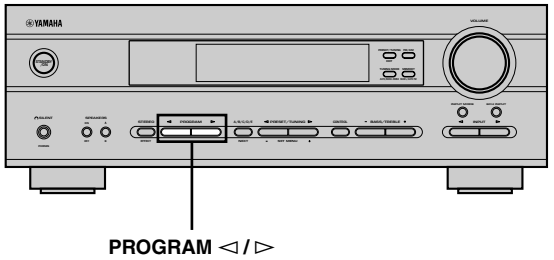
- You cannot use any DSP programs.
- The unit will output sound as 2-channel stereo from the main left and right speakers only. Therefore, you cannot adjust the level of the effect speakers while listening to such a source.

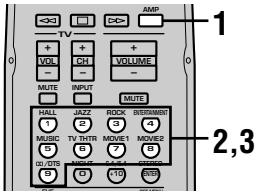
## ■ Notes on playing DTS-CD/LDs

- If the digital output data of the player has been processed in any way, the unit may not be able to perform DTS decoding even if there is a digital connection between this unit and the player.
- If you play a source encoded with a DTS signal and set the input mode to ANALOG, the unit may reproduce the noise of an unprocessed DTS signal. In this case, connect the source to a digital input jack on this unit and set the input mode to AUTO or DTS.
- If you switch the input mode to ANALOG while playing a source encoded with a DTS signal, the unit does not output any sound.
- If you play a source encoded with a DTS signal with the input mode set to AUTO;
  - The unit automatically switches to the DTS-decoding mode (The "dts" indicator lights up) after detecting the DTS signal. When playback of the DTS source is completed, the "dts" indicator may flash. While this indicator is flashing, the unit can only reproduce DTS source. If you want to play a normal PCM source immediately, change the input mode back to AUTO.
  - When the input mode is set to AUTO and a search or skip operation is performed during playback of a DTS source, the "dts" indicator may flash. If this state continues for longer than 30 seconds, the unit will automatically switch from "DTS-decoding" mode to PCM digital signal input mode. The "dts" indicator will turn off.

# Selecting a sound field program

You can enhance your listening experience by selecting a DSP program. For details about each program, see pages 27 – 30.

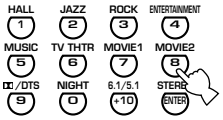


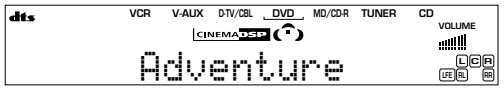




**1** **Press AMP.**

**2** **Press one of the numeric buttons on the remote control to select the desired program.**

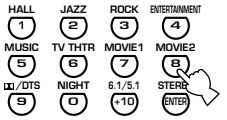
The name of the selected program appears on the front panel display.

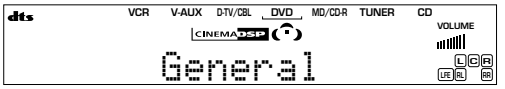



**3** **After selecting the desired program, press the same button repeatedly to cycle through sub-programs if available.**

Example: Pressing MOVIE 2 repeatedly switches the sub-program between "Adventure" and "General".



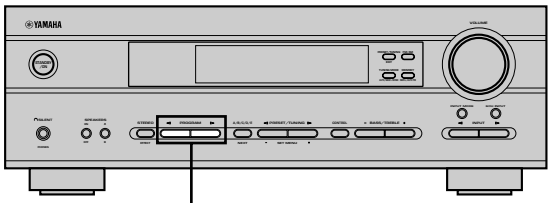

## Notes

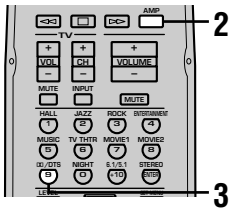
- There are 9 programs with sub-programs available with this unit. However, the selection depends on the input signal format and not all sub-programs can be used with all input signal formats.
- You cannot use the digital sound field processor with a source connected to the 6CH INPUT jacks of this unit or when the unit is reproducing a digital source with a sampling frequency greater than 48 kHz.
- The acoustics of your listening room affect the DSP program. Minimize the sound reflections in your room to maximize the effect created by the program.
- When you select an input source, this unit automatically selects the last DSP program used with that source.
- When you set this unit in standby mode, it stores the current source and DSP program in memory and automatically selects them when you turn on the power again.
- If the unit receives a Dolby Digital or DTS signal when the input mode is set to AUTO, the DSP program (No. 7–9) automatically switches to the appropriate decoding program.
- When the unit is reproducing a monaural source with PRO LOGIC or PRO LOGIC/Enhanced, or PRO LOGIC II Movie, no sound is output from the main and rear speakers. Sound can only be heard from the center speaker. (If "1A CENTER" on the set menu is set to NON, the center channel sound is output from the main speakers.)

- You can also select DSP program by pressing PROGRAM ◁ / ▷ on the front panel.
- Select a program based on your listening preference. Program names are just for reference.

## ■ Selecting PRO LOGIC or PRO LOGIC II

You can listen to 2-channel sources decoded into five discrete channels by selecting PRO LOGIC or PRO LOGIC II in program No. 9.

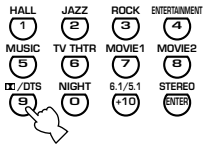


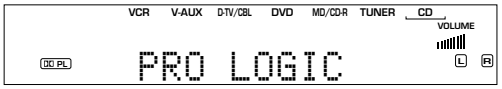




**1 Select a 2-channel source and start playback on the source component.**

**2 Press AMP.**

**3 Press DD/DTS.**




The display cycles as follows each time you press DD/DTS:
PRO LOGIC→PRO LOGIC Enhanced→PRO LOGIC II Movie→PRO LOGIC II Music→PRO LOGIC→....

- You can select PRO LOGIC, PRO LOGIC Enhanced, PRO LOGIC II Movie, and PRO LOGIC II Music by pressing PROGRAM ◁ / ▷ on the front panel repeatedly.

## ■ Playing Dolby Digital EX or DTS ES material

Press 6.1/5.1 to turn on the Dolby Digital + Matrix 6.1 or DTS + Matrix 6.1 decoder.

(Example)

The display changes AUTO → Matrix6.1 → OFF each time 6.1/5.1 is pressed.

AUTO: This mode automatically switches Dolby Digital + Matrix 6.1 and DTS + Matrix 6.1 depending on the signal. Virtual rear center speaker does not work for 5.1 channel sources.

Matrix 6.1: This setting produces 6-channel playback of the input source using the Matrix 6.1 decoder. The virtual rear center speaker can be used when playing a 5.1-channel source.

OFF: Virtual rear center speaker does not work in this setting.

### *Notes*

- Some 6.1-channel compatible discs do not have a signal (flag) that this unit can automatically detect. Select “Matrix 6.1” to play these kinds of discs with 6.1-channel sound.
- 6.1-channel playback is not possible even if you press 6.1/5.1 in the following cases:
  ① When effects are turned off.
  ② When the source connected to the 6CH INPUT jacks is being played.
  ③ When the unit is reproducing a Dolby Digital KARAOKE source.
  ④ When headphones are connected to the PHONES jack.
- The input mode resets to AUTO when you turn the unit power off.

## ■ Virtual CINEMA DSP

With Virtual CINEMA DSP, you can enjoy all DSP programs without rear speakers. It creates virtual speakers to reproduce a natural sound field.
You can listen to virtual CINEMA DSP by setting "1C REAR LR" in the set menu to NON. Sound field processing changes to VIRTUAL CINEMA DSP automatically.

### Note

- This unit is not set in the virtual CINEMA DSP mode even if "1C REAR LR" is set to NON in the following cases:
  – when the 5ch Stereo, DOLBY DIGITAL, Pro Logic, Pro Logic II, or DTS program is selected;
  – when the sound effect is turned off;
  – when 6CH INPUT is selected as the input source;
  – when a digital signal with a sampling frequency greater than 48 kHz is input to this unit;
  – when using the test tone; or
  – when connecting the headphones.

## ■ SILENT CINEMA DSP

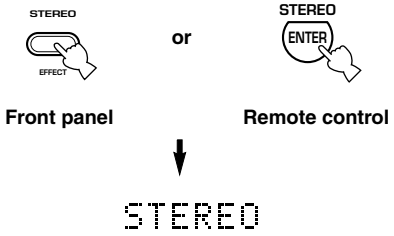
You can enjoy a powerful sound field similar to what you could expect from actual speakers through headphones, with SILENT CINEMA DSP. You can listen to SILENT CINEMA DSP by connecting your headphones to the PHONES jack while the digital sound field processor is on. The "SILENT" indicator lights up on the front panel display. (When sound effects are off, the unit reproduces the source in normal stereo.)
To listen to sounds with headphones only, press SPEAKERS ON/OFF to turn off the output of all the speakers.

### Notes

- This feature is not available when 6CH INPUT is selected or the unit is receiving a digital signal with a sampling frequency greater than 48 kHz.
- The sound from the LFE channel will be mixed and output from the headphones.

## ■ Normal stereo reproduction

**Press STEREO to turn off the sound effect for normal stereo reproduction.**
Press STEREO again to turn the sound effect back on.




### Notes

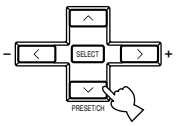
- If you turn off the sound effects, no sound is output from the center speaker or rear speakers.
- If you turn off the sound effects while the unit is reproducing sound from a Dolby Digital or DTS signal, the dynamic range of the signal is automatically compressed and the unit will mix the sounds of the center and rear speaker channels and output them from the main speakers.
- The volume may be greatly reduced when you turn off the sound effects or if you set "SOUND 4 D. RANGE (dynamic range)" on the set menu to MIN. In this case turn on the sound effect.

- During stereo reproduction, you can display information such as the type, format and sampling frequency of the signal input from the components connected to this unit.

**(While playing a source)**

**1 Press AMP.**

**2 Press ∨ to display the information about the input signal.**




(Format): The display shows the signal format. When the unit cannot detect a digital signal it automatically switches to analog input.
in: The display shows the number of input signal source channels, as follows: For multi-channel soundtrack such as front 3 channels, rear 2 channels and LFE, the display shows "3/2/LFE".
fs: The display shows the sampling frequency. When the unit is unable to detect the sampling frequency "Unknown" shows in the front panel display.
rate: The display shows the bit rate. When the unit is unable to detect the bit rate "Unknown" shows in the front panel display.
flg: The display shows the flag - data encoded in a DTS or Dolby Digital signal that causes this unit to automatically switch to the appropriate decoder for playback.